## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2018-05-22-01** **Date: 24-05-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Date of Receipt** | : | 22-05-18 |
| **Sample ID No** | : | 2018-05-22-01 |
| **Type of Mix** | : | BC (Bituminous Concrete) |
| **Date of test** | : | 22-05-18 |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 472 | 471 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.60 | 5.80 |
| 4 | Average percentage | % | 5.7 | |

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**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**



Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : CP-RW-2018-05-22-01 **Date: 24-05-18**

**Sample ID** : 2018-05-22-01

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 38 | 38 | 8.0 | 92.0 | 90-100 |
| 9.5 | 38 | 76 | 16.0 | 84.0 | 70-88 |
| 4.75 | 85 | 161 | 34.1 | 65.9 | 53-71 |
| 2.36 | 52 | 213 | 45.1 | 54.9 | 42-58 |
| 1.18 | 33 | 246 | 52.1 | 47.9 | 34-48 |
| 0.6 | 57 | 303 | 64.1 | 35.9 | 26-38 |
| 0.3 | 57 | 359 | 76.2 | 23.8 | 18-28 |
| 0.15 | 33 | 393 | 83.2 | 16.8 | 12-20 |
| 0.075 | 43 | 435 | 92.2 | 7.8 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 471

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 33 | 32.97 | 7.0 | 93.0 | 90-100 |
| 9.5 | 61 | 94.2 | 20.0 | 80.0 | 70-88 |
| 4.75 | 42 | 136.59 | 29.0 | 71.0 | 53-71 |
| 2.36 | 127 | 263.76 | 56.0 | 44.0 | 42-58 |
| 1.18 | 14 | 277.89 | 59.0 | 41.0 | 34-48 |
| 0.6 | 57 | 334.41 | 71.0 | 29.0 | 26-38 |
| 0.3 | 47 | 381.51 | 81.0 | 19.0 | 18-28 |
| 0.15 | 5 | 386.22 | 82.0 | 18.0 | 12-20 |
| 0.075 | 66 | 452.16 | 96.0 | 4.0 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

**Lab ID** : CP-RW-2018-05-18-01 **Date: 21-05-18**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore

**Address** : Vidyaranyapura Sub Division, Bangalore

**Project Name** : Package No. 04 ( Package consists of 28 works)

**Agency** : M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013

**Customer Reference** : BBMP/EE/BTP/WO/129/2017-18

**Source of Sample** : Sample supplied by Agency

**Date of Receipt** : 18-05-18

**Sample ID No** : 2018-05-18-01

**Type of Mix** : BC (Bituminous Concrete)

**Date of test** : 18-05-18

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 469 | 471 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.20 | 5.80 |
| 4 | Average percentage | % | 6.0 | |

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**Lab ID** : CP-RW-2018-05-18-01 **Date: 21-05-18**

**Sample ID** : 2018-05-18-01

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 469

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 29 | 29 | 6.1 | 93.9 | 90-100 |
| 9.5 | 71 | 100 | 21.3 | 78.7 | 70-88 |
| 4.75 | 124 | 223 | 47.6 | 52.4 | 53-71 |
| 2.36 | 29 | 252 | 53.7 | 46.3 | 42-58 |
| 1.18 | 19 | 271 | 57.7 | 42.3 | 34-48 |
| 0.6 | 67 | 337 | 71.9 | 28.1 | 26-38 |
| 0.3 | 33 | 371 | 79.0 | 21.0 | 18-28 |
| 0.15 | 43 | 413 | 88.1 | 11.9 | 12-20 |
| 0.075 | 24 | 437 | 93.2 | 6.8 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 471

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 14 | 14.13 | 3.0 | 97.0 | 90-100 |
| 9.5 | 42 | 56.52 | 12.0 | 88.0 | 70-88 |
| 4.75 | 137 | 193.11 | 41.0 | 59.0 | 53-71 |
| 2.36 | 71 | 263.76 | 56.0 | 44.0 | 42-58 |
| 1.18 | 28 | 292.02 | 62.0 | 38.0 | 34-48 |
| 0.6 | 0 | 292.02 | 62.0 | 38.0 | 26-38 |
| 0.3 | 75 | 367.38 | 78.0 | 22.0 | 18-28 |
| 0.15 | 24 | 390.93 | 83.0 | 17.0 | 12-20 |
| 0.075 | 38 | 428.61 | 91.0 | 9.0 | 4-10 |

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**R KARTHIK RECHAN**
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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

**Lab ID** : CP-RW-2018-05-23-02 **Date: 25-05-18**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore

**Address** : Vidyaranyapura Sub Division, Bangalore

**Project Name** : Package No. 04 ( Package consists of 28 works)

**Agency** : M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013

**Customer Reference** : BBMP/EE/BTP/WO/129/2017-18

**Source of Sample** : Sample supplied by Agency

**Date of Receipt** : 23-05-18

**Sample ID No** : 2018-05-23-02

**Type of Mix** : BC (Bituminous Concrete)

**Date of test** : 23-05-18

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 470 | 472 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.00 | 5.60 |
| 4 | Average percentage | % | 5.8 | |

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**Lab ID** : CP-RW-2018-05-23-02 **Date: 25-05-18**

**Sample ID** : 2018-05-23-02

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 29 | 29 | 6.1 | 93.9 | 90-100 |
| 9.5 | 90 | 119 | 25.3 | 74.7 | 70-88 |
| 4.75 | 19 | 138 | 29.3 | 70.7 | 53-71 |
| 2.36 | 133 | 271 | 57.6 | 42.4 | 42-58 |
| 1.18 | 24 | 295 | 62.7 | 37.3 | 34-48 |
| 0.6 | 52 | 347 | 73.8 | 26.2 | 26-38 |
| 0.3 | 19 | 366 | 77.8 | 22.2 | 18-28 |
| 0.15 | 43 | 409 | 86.9 | 13.1 | 12-20 |
| 0.075 | 43 | 451 | 96.0 | 4.0 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 5 | 4.75 | 1.0 | 99.0 | 90-100 |
| 9.5 | 86 | 90.25 | 19.1 | 80.9 | 70-88 |
| 4.75 | 119 | 209 | 44.3 | 55.7 | 53-71 |
| 2.36 | 14 | 223.25 | 47.3 | 52.7 | 42-58 |
| 1.18 | 52 | 275.5 | 58.4 | 41.6 | 34-48 |
| 0.6 | 57 | 332.5 | 70.4 | 29.6 | 26-38 |
| 0.3 | 43 | 375.25 | 79.5 | 20.5 | 18-28 |
| 0.15 | 43 | 418 | 88.6 | 11.4 | 12-20 |
| 0.075 | 33 | 451.25 | 95.6 | 4.4 | 4-10 |

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**Quality Manager**


*End of Report*

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-05-09-01** | **Date: 11-05-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 09-05-18 | |
| **Sample ID No** | : | 2018-05-09-01 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 09-05-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 470 | 474 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.00 | 5.20 |
| 4 | Average percentage | % | 5.6 | |

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Assistant Executive Engineer
Vidyaranyapura Sub Divisio
BBMP, Bangalore-97

**Lab ID** : **CP-RW-2018-05-09-01** **Date: 11-05-18**

**Sample ID** : **2018-05-09-01**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 19 | 19 | 4.0 | 96.0 | 90-100 |
| 9.5 | 113 | 132 | 28.0 | 72.0 | 70-88 |
| 4.75 | 56 | 188 | 40.0 | 60.0 | 53-71 |
| 2.36 | 61 | 249 | 53.0 | 47.0 | 42-58 |
| 1.18 | 24 | 273 | 58.0 | 42.0 | 34-48 |
| 0.6 | 33 | 306 | 65.0 | 35.0 | 26-38 |
| 0.3 | 61 | 367 | 78.0 | 22.0 | 18-28 |
| 0.15 | 47 | 414 | 88.0 | 12.0 | 12-20 |
| 0.075 | 38 | 451 | 96.0 | 4.0 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 474

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 23.7 | 5.0 | 95.0 | 90-100 |
| 9.5 | 52 | 75.84 | 16.0 | 84.0 | 70-88 |
| 4.75 | 137 | 213.3 | 45.0 | 55.0 | 53-71 |
| 2.36 | 33 | 246.48 | 52.0 | 48.0 | 42-58 |
| 1.18 | 24 | 270.18 | 57.0 | 43.0 | 34-48 |
| 0.6 | 62 | 331.8 | 70.0 | 30.0 | 26-38 |
| 0.3 | 52 | 383.94 | 81.0 | 19.0 | 18-28 |
| 0.15 | 19 | 402.9 | 85.0 | 15.0 | 12-20 |
| 0.075 | 24 | 426.6 | 90.0 | 10.0 | 4-10 |

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**Quality Manager**


*End of Report*

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
### IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-05-25-01** | **Date: 28-05-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 25-05-18 | |
| **Sample ID No** | : | 2018-05-25-01 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 25-05-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 472 | 473 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.60 | 5.40 |
| 4 | Average percentage | % | 5.5 | |

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AE-II

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : CP-RW-2018-05-25-01 **Date: 28-05-18**

**Sample ID** : 2018-05-25-01

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 5 | 5 | 1.0 | 99.0 | 90-100 |
| 9.5 | 76 | 80 | 17.0 | 83.0 | 70-88 |
| 4.75 | 61 | 142 | 30.0 | 70.0 | 53-71 |
| 2.36 | 90 | 231 | 49.0 | 51.0 | 42-58 |
| 1.18 | 71 | 302 | 64.0 | 36.0 | 34-48 |
| 0.6 | 47 | 349 | 74.0 | 26.0 | 26-38 |
| 0.3 | 33 | 382 | 81.0 | 19.0 | 18-28 |
| 0.15 | 0 | 382 | 81.0 | 19.0 | 12-20 |
| 0.075 | 61 | 444 | 94.0 | 6.0 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 19 | 18.96 | 4.0 | 96.0 | 90-100 |
| 9.5 | 43 | 61.62 | 13.0 | 87.0 | 70-88 |
| 4.75 | 142 | 203.82 | 43.1 | 56.9 | 53-71 |
| 2.36 | 9 | 213.3 | 45.1 | 54.9 | 42-58 |
| 1.18 | 38 | 251.22 | 53.1 | 46.9 | 34-48 |
| 0.6 | 57 | 308.1 | 65.1 | 34.9 | 26-38 |
| 0.3 | 76 | 383.94 | 81.2 | 18.8 | 18-28 |
| 0.15 | 33 | 417.12 | 88.2 | 11.8 | 12-20 |
| 0.075 | 9 | 426.6 | 90.2 | 9.8 | 4-10 |

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**R KARTHIK RECHAN**
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*End of Report*

Assistant Executive Engineer
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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
### IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-04-21-05** | **Date: 23-04-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 21-04-18 | |
| **Sample ID No** | : | 2018-04-21-05 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 21-04-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 470 | 472 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.00 | 5.60 |
| 4 | Average percentage | % | 5.8 | |

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**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**



Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : **CP-RW-2018-04-21-05** **Date: 23-04-18**

**Sample ID** : **2018-04-21-05**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 33 | 33 | 7.1 | 92.9 | 90-100 |
| 9.5 | 100 | 133 | 28.2 | 71.8 | 70-88 |
| 4.75 | 33 | 166 | 35.3 | 64.7 | 53-71 |
| 2.36 | 90 | 256 | 54.5 | 45.5 | 42-58 |
| 1.18 | 57 | 313 | 66.6 | 33.4 | 34-48 |
| 0.6 | 28 | 341 | 72.6 | 27.4 | 26-38 |
| 0.3 | 43 | 384 | 81.7 | 18.3 | 18-28 |
| 0.15 | 19 | 403 | 85.7 | 14.3 | 12-20 |
| 0.075 | 38 | 441 | 93.8 | 6.2 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 19 | 18.88 | 4.0 | 96.0 | 90-100 |
| 9.5 | 85 | 103.84 | 22.0 | 78.0 | 70-88 |
| 4.75 | 113 | 217.12 | 46.0 | 54.0 | 53-71 |
| 2.36 | 19 | 236 | 50.0 | 50.0 | 42-58 |
| 1.18 | 47 | 283.2 | 60.0 | 40.0 | 34-48 |
| 0.6 | 38 | 320.96 | 68.0 | 32.0 | 26-38 |
| 0.3 | 57 | 377.6 | 80.0 | 20.0 | 18-28 |
| 0.15 | 9 | 387.04 | 82.0 | 18.0 | 12-20 |
| 0.075 | 61 | 448.4 | 95.0 | 5.0 | 4-10 |

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CIVIL PRO BANGALORE Sig..... Date.....



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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | CP-RW-2018-04-16-13 | **Date: 18-04-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 16-04-18 | |
| **Sample ID No** | : | 2018-04-16-13 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 16-04-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 470 | 473 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.00 | 5.40 |
| 4 | Average percentage | % | 5.7 | |

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : **CP-RW-2018-04-16-13** **Date: 18-04-18**

**Sample ID** : **2018-04-16-13**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 19 | 19 | 4.0 | 96.0 | 90-100 |
| 9.5 | 76 | 95 | 20.2 | 79.8 | 70-88 |
| 4.75 | 95 | 190 | 40.4 | 59.6 | 53-71 |
| 2.36 | 29 | 219 | 46.5 | 53.5 | 42-58 |
| 1.18 | 48 | 266 | 56.6 | 43.4 | 34-48 |
| 0.6 | 76 | 342 | 72.8 | 27.2 | 26-38 |
| 0.3 | 14 | 356 | 75.8 | 24.2 | 18-28 |
| 0.15 | 57 | 413 | 87.9 | 12.1 | 12-20 |
| 0.075 | 43 | 456 | 97.0 | 3.0 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 14 | 14.28 | 3.0 | 97.0 | 90-100 |
| 9.5 | 76 | 90.44 | 19.1 | 80.9 | 70-88 |
| 4.75 | 133 | 223.72 | 47.3 | 52.7 | 53-71 |
| 2.36 | 5 | 228.48 | 48.3 | 51.7 | 42-58 |
| 1.18 | 62 | 290.36 | 61.4 | 38.6 | 34-48 |
| 0.6 | 33 | 323.68 | 68.4 | 31.6 | 26-38 |
| 0.3 | 33 | 357 | 75.5 | 24.5 | 18-28 |
| 0.15 | 62 | 418.88 | 88.6 | 11.4 | 12-20 |
| 0.075 | 38 | 456.96 | 96.6 | 3.4 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
### IS 2386 (Part 1) 1963 (RA 2011 )

**Lab ID** : CP-RW-2018-05-28-01 **Date: 30-05-18**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore

**Address** : Vidyaranyapura Sub Division, Bangalore

**Project Name** : Package No. 04 ( Package consists of 28 works)

**Agency** : M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013

**Customer Reference** : BBMP/EE/BTP/WO/129/2017-18

**Source of Sample** : Sample supplied by Agency

**Date of Receipt** : 28-05-18

**Sample ID No** : 2018-05-28-01

**Type of Mix** : BC (Bituminous Concrete)

**Date of test** : 28-05-18

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 473 | 473 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.40 | 5.40 |
| 4 | Average percentage | % | 5.4 | |

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**Quality Manager**

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**Lab ID** : CP-RW-2018-05-28-01 **Date: 30-05-18**

**Sample ID** : 2018-05-28-01

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 43 | 43 | 9.1 | 90.9 | 90-100 |
| 9.5 | 14 | 57 | 12.2 | 87.8 | 70-88 |
| 4.75 | 134 | 192 | 40.5 | 59.5 | 53-71 |
| 2.36 | 77 | 268 | 56.7 | 43.3 | 42-58 |
| 1.18 | 34 | 302 | 63.8 | 36.2 | 34-48 |
| 0.6 | 24 | 326 | 68.9 | 31.1 | 26-38 |
| 0.3 | 62 | 388 | 82.0 | 18.0 | 18-28 |
| 0.15 | 5 | 393 | 83.0 | 17.0 | 12-20 |
| 0.075 | 57 | 450 | 95.2 | 4.8 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 33 | 33.32 | 7.0 | 93.0 | 90-100 |
| 9.5 | 76 | 109.48 | 23.1 | 76.9 | 70-88 |
| 4.75 | 90 | 199.92 | 42.3 | 57.7 | 53-71 |
| 2.36 | 19 | 218.96 | 46.3 | 53.7 | 42-58 |
| 1.18 | 43 | 261.8 | 55.3 | 44.7 | 34-48 |
| 0.6 | 67 | 328.44 | 69.4 | 30.6 | 26-38 |
| 0.3 | 38 | 366.52 | 77.5 | 22.5 | 18-28 |
| 0.15 | 33 | 399.84 | 84.5 | 15.5 | 12-20 |
| 0.075 | 57 | 456.96 | 96.6 | 3.4 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

**Lab ID** : CP-RW-2018-05-29-01 **Date: 31-05-18**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore

**Address** : Vidyaranyapura Sub Division, Bangalore

**Project Name** : Package No. 04 ( Package consists of 28 works)

**Agency** : M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013

**Customer Reference** : BBMP/EE/BTP/WO/129/2017-18

**Source of Sample** : Sample supplied by Agency

**Date of Receipt** : 29-05-18

**Sample ID No** : 2018-05-29-01

**Type of Mix** : BC (Bituminous Concrete)

**Date of test** : 29-05-18

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 470 | 471 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.00 | 5.80 |
| 4 | Average percentage | % | 5.9 | |

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**Lab ID** : **CP-RW-2018-05-29-01** **Date: 31-05-18**

**Sample ID** : **2018-05-29-01**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 14 | 14 | 3.0 | 97.0 | 90-100 |
| 9.5 | 47 | 61 | 13.1 | 86.9 | 70-88 |
| 4.75 | 142 | 203 | 43.3 | 56.7 | 53-71 |
| 2.36 | 19 | 222 | 47.3 | 52.7 | 42-58 |
| 1.18 | 43 | 265 | 56.4 | 43.6 | 34-48 |
| 0.6 | 57 | 322 | 68.4 | 31.6 | 26-38 |
| 0.3 | 57 | 378 | 80.5 | 19.5 | 18-28 |
| 0.15 | 24 | 402 | 85.5 | 14.5 | 12-20 |
| 0.075 | 43 | 445 | 94.6 | 5.4 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 471

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 23.85 | 5.1 | 94.9 | 90-100 |
| 9.5 | 48 | 71.55 | 15.2 | 84.8 | 70-88 |
| 4.75 | 67 | 138.33 | 29.4 | 70.6 | 53-71 |
| 2.36 | 129 | 267.12 | 56.7 | 43.3 | 42-58 |
| 1.18 | 43 | 310.05 | 65.8 | 34.2 | 34-48 |
| 0.6 | 29 | 338.67 | 71.9 | 28.1 | 26-38 |
| 0.3 | 29 | 367.29 | 78.0 | 22.0 | 18-28 |
| 0.15 | 43 | 410.22 | 87.1 | 12.9 | 12-20 |
| 0.075 | 48 | 457.92 | 97.2 | 2.8 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-06-31-01** | **Date: 02-06-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 31-05-18 | |
| **Sample ID No** | : | 2018-06-31-01 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 31-05-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 472 | 469 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.60 | 6.20 |
| 4 | Average percentage | % | 5.9 | |

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**Authorized Signatory**
**Quality Manager**



Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : **CP-RW-2018-06-31-01** **Date: 02-06-18**

**Sample ID** : **2018-06-31-01**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 47 | 47 | 10.0 | 90.0 | 90-100 |
| 9.5 | 76 | 123 | 26.1 | 73.9 | 70-88 |
| 4.75 | 100 | 223 | 47.2 | 52.8 | 53-71 |
| 2.36 | 19 | 242 | 51.2 | 48.8 | 42-58 |
| 1.18 | 38 | 280 | 59.3 | 40.8 | 34-48 |
| 0.6 | 14 | 294 | 62.3 | 37.7 | 26-38 |
| 0.3 | 85 | 379 | 80.3 | 19.7 | 18-28 |
| 0.15 | 38 | 417 | 88.4 | 11.6 | 12-20 |
| 0.075 | 28 | 446 | 94.4 | 5.6 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 469

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 43 | 43.2 | 9.2 | 90.8 | 90-100 |
| 9.5 | 72 | 115.2 | 24.6 | 75.4 | 70-88 |
| 4.75 | 38 | 153.6 | 32.8 | 67.2 | 53-71 |
| 2.36 | 48 | 201.6 | 43.0 | 57.0 | 42-58 |
| 1.18 | 72 | 273.6 | 58.3 | 41.7 | 34-48 |
| 0.6 | 53 | 326.4 | 69.6 | 30.4 | 26-38 |
| 0.3 | 24 | 350.4 | 74.7 | 25.3 | 18-28 |
| 0.15 | 38 | 388.8 | 82.9 | 17.1 | 12-20 |
| 0.075 | 53 | 441.6 | 94.2 | 5.8 | 4-10 |

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BBMP, Bangalore - 97

## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-06-01-01** | **Date: 04-06-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 01-06-18 | |
| **Sample ID No** | : | 2018-06-01-01 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 01-06-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 471 | 470 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.80 | 6.00 |
| 4 | Average percentage | % | 5.9 | |

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : **CP-RW-2018-06-01-01** **Date: 04-06-18**

**Sample ID** : **2018-06-01-01**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 471

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 24 | 5.1 | 94.9 | 90-100 |
| 9.5 | 57 | 81 | 17.2 | 82.8 | 70-88 |
| 4.75 | 90 | 171 | 36.4 | 63.6 | 53-71 |
| 2.36 | 29 | 200 | 42.4 | 57.6 | 42-58 |
| 1.18 | 109 | 309 | 65.7 | 34.3 | 34-48 |
| 0.6 | 33 | 343 | 72.8 | 27.2 | 26-38 |
| 0.3 | 14 | 357 | 75.8 | 24.2 | 18-28 |
| 0.15 | 62 | 419 | 88.9 | 11.1 | 12-20 |
| 0.075 | 33 | 452 | 96.0 | 4.0 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 43 | 42.84 | 9.1 | 90.9 | 90-100 |
| 9.5 | 90 | 133.28 | 28.4 | 71.6 | 70-88 |
| 4.75 | 62 | 195.16 | 41.5 | 58.5 | 53-71 |
| 2.36 | 81 | 276.08 | 58.7 | 41.3 | 42-58 |
| 1.18 | 5 | 280.84 | 59.8 | 40.2 | 34-48 |
| 0.6 | 24 | 304.64 | 64.8 | 35.2 | 26-38 |
| 0.3 | 57 | 361.76 | 77.0 | 23.0 | 18-28 |
| 0.15 | 19 | 380.8 | 81.0 | 19.0 | 12-20 |
| 0.075 | 71 | 452.2 | 96.2 | 3.8 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-06-07-01** | **Date: 11-06-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 07-06-18 | |
| **Sample ID No** | : | 2018-06-07-01 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 07-06-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 469 | 472 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.20 | 5.60 |
| 4 | Average percentage | % | 5.9 | |

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**Lab ID** : **CP-RW-2018-06-07-01** **Date: 11-06-18**

**Sample ID** : **2018-06-07-01**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 469

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 38 | 38 | 8.1 | 91.9 | 90-100 |
| 9.5 | 90 | 128 | 27.3 | 72.7 | 70-88 |
| 4.75 | 48 | 176 | 37.5 | 62.5 | 53-71 |
| 2.36 | 48 | 223 | 47.6 | 52.4 | 42-58 |
| 1.18 | 52 | 276 | 58.7 | 41.3 | 34-48 |
| 0.6 | 52 | 328 | 69.9 | 30.1 | 26-38 |
| 0.3 | 19 | 347 | 73.9 | 26.1 | 18-28 |
| 0.15 | 43 | 390 | 83.0 | 17.0 | 12-20 |
| 0.075 | 67 | 456 | 97.2 | 2.8 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 23.95 | 5.1 | 94.9 | 90-100 |
| 9.5 | 81 | 105.38 | 22.3 | 77.7 | 70-88 |
| 4.75 | 48 | 153.28 | 32.5 | 67.5 | 53-71 |
| 2.36 | 72 | 225.13 | 47.7 | 52.3 | 42-58 |
| 1.18 | 67 | 292.19 | 61.9 | 38.1 | 34-48 |
| 0.6 | 62 | 354.46 | 75.1 | 24.9 | 26-38 |
| 0.3 | 24 | 378.41 | 80.2 | 19.8 | 18-28 |
| 0.15 | 10 | 387.99 | 82.2 | 17.8 | 12-20 |
| 0.075 | 62 | 450.26 | 95.4 | 4.6 | 4-10 |

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**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**



CIVIL Pro BANGALORE Sig..... Date.....

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2018-06-08-01** **Date: 11-06-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Date of Receipt** | : | 08-06-18 |
| **Sample ID No** | : | 2018-06-08-01 |
| **Type of Mix** | : | BC (Bituminous Concrete) |
| **Date of test** | : | 08-06-18 |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 472 | 470 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.60 | 6.00 |
| 4 | Average percentage | % | 5.8 | |

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**Lab ID** : CP-RW-2018-06-08-01 **Date: 11-06-18**

**Sample ID** : 2018-06-08-01

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 472

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 5 | 5 | 1.0 | 99.0 | 90-100 |
| 9.5 | 124 | 129 | 27.2 | 72.8 | 70-88 |
| 4.75 | 43 | 171 | 36.3 | 63.7 | 53-71 |
| 2.36 | 81 | 252 | 53.4 | 46.6 | 42-58 |
| 1.18 | 33 | 286 | 60.5 | 39.5 | 34-48 |
| 0.6 | 48 | 333 | 70.6 | 29.4 | 26-38 |
| 0.3 | 43 | 376 | 79.7 | 20.3 | 18-28 |
| 0.15 | 24 | 400 | 84.7 | 15.3 | 12-20 |
| 0.075 | 33 | 433 | 91.8 | 8.2 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 5 | 4.79 | 1.0 | 99.0 | 90-100 |
| 9.5 | 115 | 119.75 | 25.5 | 74.5 | 70-88 |
| 4.75 | 105 | 225.13 | 47.9 | 52.1 | 53-71 |
| 2.36 | 10 | 234.71 | 49.9 | 50.1 | 42-58 |
| 1.18 | 81 | 316.14 | 67.3 | 32.7 | 34-48 |
| 0.6 | 10 | 325.72 | 69.3 | 30.7 | 26-38 |
| 0.3 | 48 | 373.62 | 79.5 | 20.5 | 18-28 |
| 0.15 | 10 | 383.2 | 81.5 | 18.5 | 12-20 |
| 0.075 | 57 | 440.68 | 93.8 | 6.2 | 4-10 |

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**Quality Manager**



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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
### IS 2386 (Part 1) 1963 (RA 2011 )

| | | |
|---|---|---|
| **Lab ID** | : | **CP-RW-2018-05-08-01** **Date: 10-05-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 |
| **Customer Reference** | : | BBMP/EF/BTP/WO/129/2017-18 |
| **Source of Sample** | : | Sample supplied by Agency |
| **Date of Receipt** | : | 08-05-18 |
| **Sample ID No** | : | 2018-05-08-01 |
| **Type of Mix** | : | BC (Bituminous Concrete) |
| **Date of test** | : | 08-05-18 |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 471 | 469 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.80 | 6.20 |
| 4 | Average percentage | % | 6.0 | |

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**Lab ID** : **CP-RW-2018-05-08-01** **Date: 10-05-18**

**Sample ID** : **2018-05-08-01**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 471

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0 0 | 100.0 | 100 |
| 13.2 | 33 | 33 | 7.0 | 93.0 | 90-100 |
| 9.5 | 38 | 71 | 15.1 | 84.9 | 70-88 |
| 4.75 | 132 | 203 | 43.2 | 56.8 | 53-71 |
| 2.36 | 19 | 222 | 47.2 | 52.8 | 42-58 |
| 1.18 | 38 | 260 | 55.2 | 44.8 | 34-48 |
| 0.6 | 66 | 326 | 69.3 | 30.7 | 26-38 |
| 0.3 | 61 | 388 | 82.3 | 17.7 | 18-28 |
| 0.15 | 28 | 416 | 88.4 | 11.6 | 12-20 |
| 0.075 | 14 | 430 | 91.4 | 8.6 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 469

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 38 | 38.32 | 8.2 | 91.8 | 90-100 |
| 9.5 | 29 | 67.06 | 14.3 | 85.7 | 70-88 |
| 4.75 | 72 | 138.91 | 29.6 | 70.4 | 53-71 |
| 2.36 | 77 | 215.55 | 46.0 | 54.0 | 42-58 |
| 1.18 | 57 | 273.03 | 58.2 | 41.8 | 34-48 |
| 0.6 | 34 | 306.56 | 65.4 | 34.6 | 26-38 |
| 0.3 | 62 | 368.83 | 78.6 | 21.4 | 18-28 |
| 0.15 | 24 | 392.78 | 83.7 | 16.3 | 12-20 |
| 0.075 | 38 | 431.1 | 91.9 | 8.1 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
### IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-05-09-02** | **Date: 11-05-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division. Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 09-05-18 | |
| **Sample ID No** | : | 2018-05-09-02 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 09-05-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 471 | 473 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.80 | 5.40 |
| 4 | Average percentage | % | 5.6 | |

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Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : CP-RW-2018-05-09-02 **Date: 11-05-18**

**Sample ID** : 2018-05-09-02

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 471

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 19 | 19 | 4.0 | 96.0 | 90-100 |
| 9.5 | 75 | 94 | 20.0 | 80.0 | 70-88 |
| 4.75 | 71 | 165 | 35.0 | 65.0 | 53-71 |
| 2.36 | 80 | 245 | 52.0 | 48.0 | 42-58 |
| 1.18 | 9 | 254 | 54.0 | 46.0 | 34-48 |
| 0.6 | 66 | 320 | 68.0 | 32.0 | 26-38 |
| 0.3 | 33 | 353 | 75.0 | 25.0 | 18-28 |
| 0.15 | 47 | 400 | 85.0 | 15.0 | 12-20 |
| 0.075 | 38 | 438 | 93.0 | 7.0 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 28 | 28.44 | 6.0 | 94.0 | 90-100 |
| 9.5 | 62 | 90.06 | 19.0 | 81.0 | 70-88 |
| 4.75 | 62 | 151.68 | 32.1 | 67.9 | 53-71 |
| 2.36 | 114 | 265.44 | 56.1 | 43.9 | 42-58 |
| 1.18 | 19 | 284.4 | 60.1 | 39.9 | 34-48 |
| 0.6 | 14 | 298.62 | 63.1 | 36.9 | 26-38 |
| 0.3 | 57 | 355.5 | 75.2 | 24.8 | 18-28 |
| 0.15 | 47 | 402.9 | 85.2 | 14.8 | 12-20 |
| 0.075 | 28 | 431.34 | 91.2 | 8.8 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

| | | | |
|---|---|---|---|
| **Lab ID** | : | **CP-RW-2018-04-24-02** | **Date: 26-04-18** |
| **Customer** | : | Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore | |
| **Address** | : | Vidyaranyapura Sub Division, Bangalore | |
| **Project Name** | : | Package No. 04 ( Package consists of 28 works) | |
| **Agency** | : | M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013 | |
| **Customer Reference** | : | BBMP/EE/BTP/WO/129/2017-18 | |
| **Source of Sample** | : | Sample supplied by Agency | |
| **Date of Receipt** | : | 24-04-18 | |
| **Sample ID No** | : | 2018-04-24-02 | |
| **Type of Mix** | : | BC (Bituminous Concrete) | |
| **Date of test** | : | 24-04-18 | |

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 473 | 470 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.40 | 6.00 |
| 4 | Average percentage | % | 5.7 | |

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : **CP-RW-2018-04-24-02** **Date: 26-04-18**

**Sample ID** : **2018-04-24-02**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specifieation table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 29 | 29 | 6.0 | 94.0 | 90-100 |
| 9.5 | 67 | 95 | 20.1 | 79.9 | 70-88 |
| 4.75 | 43 | 138 | 29.1 | 70.9 | 53-71 |
| 2.36 | 114 | 252 | 53.2 | 46.8 | 42-58 |
| 1.18 | 24 | 276 | 58.2 | 41.8 | 34-48 |
| 0.6 | 43 | 318 | 67.3 | 32.7 | 26-38 |
| 0.3 | 43 | 361 | 76.3 | 23.7 | 18-28 |
| 0.15 | 43 | 404 | 85.4 | 14.6 | 12-20 |
| 0.075 | 38 | 442 | 93.4 | 6.6 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 470

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 23.75 | 5.1 | 94.9 | 90-100 |
| 9.5 | 62 | 85.5 | 18.2 | 81.8 | 70-88 |
| 4.75 | 128 | 213.75 | 45.5 | 54.5 | 53-71 |
| 2.36 | 0 | 213.75 | 45.5 | 54.5 | 42-58 |
| 1.18 | 81 | 294.5 | 62.7 | 37.3 | 34-48 |
| 0.6 | 29 | 323 | 68.7 | 31.3 | 26-38 |
| 0.3 | 38 | 361 | 76.8 | 23.2 | 18-28 |
| 0.15 | 33 | 394.25 | 83.9 | 16.1 | 12-20 |
| 0.075 | 43 | 437 | 93.0 | 7.0 | 4-10 |

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## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
## IS 2386 (Part 1) 1963 (RA 2011 )

**Lab ID** : CP-RW-2018-05-18-02 **Date: 21-05-18**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore

**Address** : Vidyaranyapura Sub Division, Bangalore

**Project Name** : Package No. 04 ( Package consists of 28 works)

**Agency** : M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013

**Customer Reference** : BBMP/EE/BTP/WO/129/2017-18

**Source of Sample** : Sample supplied by Agency

**Date of Receipt** : 18-05-18

**Sample ID No** : 2018-05-18-02

**Type of Mix** : BC (Bituminous Concrete)

**Date of test** : 18-05-18

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 469 | 468 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 6.20 | 6.40 |
| 4 | Average percentage | % | 6.3 | |

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : **CP-RW-2018-05-18-02** **Date: 21-05-18**

**Sample ID** : **2018-05-18-02**

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 469

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 29 | 29 | 6.1 | 93.9 | 90-100 |
| 9.5 | 43 | 72 | 15.4 | 84.6 | 70-88 |
| 4.75 | 82 | 154 | 32.8 | 67.2 | 53-71 |
| 2.36 | 62 | 216 | 46.1 | 53.9 | 42-58 |
| 1.18 | 43 | 259 | 55.3 | 44.7 | 34-48 |
| 0.6 | 72 | 331 | 70.6 | 29.4 | 26-38 |
| 0.3 | 43 | 374 | 79.8 | 20.2 | 18-28 |
| 0.15 | 10 | 384 | 81.9 | 18.1 | 12-20 |
| 0.075 | 67 | 451 | 96.2 | 3.8 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 468

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 23.9 | 5.1 | 94.9 | 90-100 |
| 9.5 | 96 | 119.5 | 25.5 | 74.5 | 70-88 |
| 4.75 | 53 | 172.08 | 36.8 | 63.2 | 53-71 |
| 2.36 | 67 | 239 | 51.1 | 48.9 | 42-58 |
| 1.18 | 57 | 296.36 | 63.3 | 36.7 | 34-48 |
| 0.6 | 57 | 353.72 | 75.6 | 24.4 | 26-38 |
| 0.3 | 19 | 372.84 | 79.7 | 20.3 | 18-28 |
| 0.15 | 10 | 382.4 | 81.7 | 18.3 | 12-20 |
| 0.075 | 53 | 434.98 | 92.9 | 7.1 | 4-10 |

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BBMP, Bangalore - 97

## TEST RESULTS OF BITUMEN CONTENT AND GRADATION FOR BC
### IS 2386 (Part 1) 1963 (RA 2011 )

**Lab ID** : **CP-RW-2018-04-26-04** **Date: 28-04-18**

**Customer** : Assistant Executive Engineer, Vidyaranyapura Sub Division, Bangalore

**Address** : Vidyaranyapura Sub Division, Bangalore

**Project Name** : Package No. 04 ( Package consists of 28 works)

**Agency** : M/s. Ram and company, Sri. C R GIRISH, No. 12, Patel Pillegowda layout, Ramachandrapura, Bangalore- 560013

**Customer Reference** : BBMP/EE/BTP/WO/129/2017-18

**Source of Sample** : Sample supplied by Agency

**Date of Receipt** : 26-04-18

**Sample ID No** : 2018-04-26-04

**Type of Mix** : BC (Bituminous Concrete)

**Date of test** : 26-04-18

| Sl.no | Description | Index | Trail 1 | Trail 2 |
|---|---|---|---|---|
| 1 | Weight of the Sample | A | 500 | 500 |
| 2 | Weight of the sample After extraction | B | 473 | 468 |
| 3 | Bitumen percentage | $\frac{A-B}{A} \times 100$ | 5.40 | 6.40 |
| 4 | Average percentage | % | 5.9 | |

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**Authorized Signatory**
**Quality Manager**

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Vidyaranyapura Sub Division
BBMP, Bangalore - 97

**Lab ID** : CP-RW-2018-04-26-04 **Date: 28-04-18**

**Sample ID** : 2018-04-26-04

**AFTER EXTRACTION - Trail-1**

**Total Weight of the Sample(gm)** : 473

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 19 | 19 | 4.0 | 96.0 | 90-100 |
| 9.5 | 81 | 100 | 21.1 | 78.9 | 70-88 |
| 4.75 | 52 | 152 | 32.1 | 67.9 | 53-71 |
| 2.36 | 52 | 204 | 43.2 | 56.8 | 42-58 |
| 1.18 | 86 | 290 | 61.3 | 38.7 | 34-48 |
| 0.6 | 24 | 314 | 66.3 | 33.7 | 26-38 |
| 0.3 | 57 | 371 | 78.3 | 21.7 | 18-28 |
| 0.15 | 29 | 399 | 84.4 | 15.6 | 12-20 |
| 0.075 | 52 | 451 | 95.4 | 4.6 | 4-10 |

**AFTER EXTRACTION - Trail-2**

**Total Weight of the Sample(gm)** : 468

| IS Sieve Size (mm) | Weight Retained (gm) | Comulative Weight Retained (gm) | Comulative % of Retained | Comulative % of Passing | Secified limits as per MORTH specification table 500-23(grading-2) |
|---|---|---|---|---|---|
| 19 | 0 | 0 | 0.0 | 100.0 | 100 |
| 13.2 | 24 | 23.65 | 5.1 | 94.9 | 90-100 |
| 9.5 | 109 | 132.44 | 28.3 | 71.7 | 70-88 |
| 4.75 | 19 | 151.36 | 32.3 | 67.7 | 53-71 |
| 2.36 | 90 | 241.23 | 51.5 | 48.5 | 42-58 |
| 1.18 | 66 | 307.45 | 65.7 | 34.3 | 34-48 |
| 0.6 | 43 | 350.02 | 74.8 | 25.2 | 26-38 |
| 0.3 | 38 | 387.86 | 82.9 | 17.1 | 18-28 |
| 0.15 | 14 | 402.05 | 85.9 | 14.1 | 12-20 |
| 0.075 | 33 | 435.16 | 93.0 | 7.0 | 4-10 |

**Note:**

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 90 days from the date of issue of test certificate

**FOR CIVIL Pro.**

**R KARTHIK RECHAN**
**Authorized Signatory**
**Quality Manager**

CIVIL Pro Sig..... Date..... BANGALORE



*End of Report*

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